

# Final Report

Tibetan Village Solar Panel Project

西藏自治区太阳能光伏项目

to

The German Embassy

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*from*

西藏自治区

# Summary

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## What?

Tibetan Village  
Solar Electricity Generating Panel Project  
西藏自治区甘孜藏族自治州巴塘县仲陈龙村太阳能发电项目

## Where?

Sgongshoog 肆龍村 Village, Zhongchenrong 仲陳龍 Township, Bathang 巴塘 County,  
Ganzi 甘孜藏族自治州 Tibetan Autonomous Prefecture,  
Sichuan 四川省 Province

## Who?

25 Tibetan Households  
209 Impoverished Tibetan Villagers

## Value?

Donor Contribution = 20,000 RMB  
Local Contribution = 2,500 RMB

# Photographs



Mr. Dawa's (b. 1962; right) household includes his 33-year-old son, daughter-in-law, and two grandsons. All are farmers. His daughter-in-law, Degeji, was primarily responsible for collecting wood for lighting. Dawa said "Before we had a solar panel, my daughter-in-law went 6-7 km to a mountain to collect wood with a horse or mule. This trip took a day. Now that we have the solar panel, she doesn't have to collect wood for lighting. The panel is very useful. It can provide 8 hours of lighting."

Ms. Chenpie's (b. 1956; center) family consists of her three children, husband, her parents, and herself. She said, "Before the project, we used much of our butter for lighting. We had none to sell. Two of my children didn't attend school because we didn't have enough money. But now some of our problems have been solved by the panel and I'll send my third child to school."

Mr. Arzhu's (b. 1959; left) family has four people—his wife, two children, and himself. All are farmers. Fuel collecting is mainly Mr. Arzhu's task. Mr. Arzhu told us, "Before we had a solar panel, I had to collect wood for our light. I also must do housework and work in the fields. Now, thanks to the solar panel, we don't have to worry about spending time collecting wood to burn for lighting."



Ms. Lamu's (b.1980; left-rear, in red sweater) household consists of her parents-in-law, husband, two children, and herself. All are farmers. Housework is mainly Ms. Lamu's duty. Ms. Lamu said, "Before we had a solar panel, we bought diesel for lighting, even when we had very little money. My husband is seriously ill, which makes life more difficult. Now that we have the solar panel, I don't have to worry about lighting. I now have more time to do fieldwork."

Mr. Pubu's (b. 1964; center) household consists of his wife, two children and himself. He said, "Before the project, my older son and I often left the village to work to earn income. For many reasons my older son did not get the chance to attend school. Now that we have the solar panel, I plan for my younger son to go to school."

Pencuo (b 1953; right-rear) households consists of his parents-in-law, his wife, three children, and himself .He said, "Before the project, the money I earned needed to be used for clothes, food, and lighting. And we all worried about our lighting. We had no money to pay school fees so none of my children had the chance to study .But now we that have the panel, some of our problems are solved."



Ms. Dercuo's (b. 1962; center-right) household includes her husband and her two sons. All are farmers. Leaving the village to work outside for cash income is mainly Ms. Dercuo's duty. She told us, "Before we had a solar panel, I needed to go out to work for my family because my husband is seriously ill. Our two children have no chance to study in school. Now that we have a solar panel, we don't need to worry about lighting at night. The solar panels are very useful."

Mr. Tashidenzhu's (b.1973; left) family consists of his daughter, wife, and himself. He said, "I have been very ill since my parents died. I can do very little for my family. Everything depends on my wife and ten year old daughter. I'm very happy to get a solar panel from the German Embassy. It has helped us all.".

Ms. Syongtrong's (b 1957; right-rear), households consists of her husband, two children and herself. She said, "Before the project, my husband often left home to earn money so he wasn't here to collect wood for lighting. My two children are both girls and they were not able to collect wood. Now we get the panel and we no longer have to worry about lighting. It's just wonderful!".



Zhoma (b.1993) said, "My parents were killed in a traffic accident when I was five years old. I live with my grandmother. Before we get solar panel, I needed to do many things in the daytime and couldn't work at night. There no money to buy candle, oil for lighting, and no man to go forest for wood, We use butter on light if there are little butter left, But now I don't need worry about light and I can do such work at night as separate milk, thanks to the solar panel."

Dear German Embassy,

I am very pleased to report to you that the project the German Embassy sponsored has been successfully completed. Currently 209 Tibetans from Sgongshog Village, Zhongchenrong Township, Bathang County, Ganzi Prefecture in Sichuan Province are benefiting from this project.

After the distribution of the solar panels, I visited the village leader, Denzhu, one night. He offered me tea, bread, and cooked a dish of potatoes under the solar panel even though I said there was no need. "I can't offer you any other dishes. This simple dish of potatoes is easy for me to cook now by the panel light. Before, when I had to do something at night, I had to burn oil but that's not necessary now. This is so useful, especially when there are few people in a family. We no longer need to worry about having light at night. Before the project, I had to go to the forest far away. You know the situation here, right? This is a farming place and there are few livestock so we don't have enough butter to burn for lighting. People collect wood to burn at night for light. This is hard work. We have to bring it home in a big bundle on our backs or carry it with horses from the other side of the mountains. And we had to do this once or twice a week. But now we won't have to do this anymore, thanks to the solar panels."

I also talked to 14-year-old Zhoma, who was orphaned when she was 5 years old. She said, "Collecting wood is such a waste of time. The forest is far away and it takes a long time to go to the forest, search for wood, and then bring it back home. It also saves us money. In one night you need to burn at least 10 pieces of woods or a bottle of oil. The panel saves 15 RMB a week."

Thirteen-year-old Dorjie told me, "My family used to cook in the dark kitchen at night, and I had to help my mom by lighting butter lamps in the dark kitchen when she was cooking. I hated that. Because of a lack of lighting, I often could not complete my homework and was then beaten by my teacher. But now we don't have to worry about lighting anymore."

On behalf of Sgongshog villagers, I express sincere appreciation for your help.

Truly yours,

Bkashi (Wayne)

# **Benefits**

**25 solar panels sponsored by the German Embassy have:**

- Made it easy for children to easily complete their school homework at night.
- Given villagers more time to work in the fields and earn income by not having to collect wood to burn at night for lighting.
- Decreased illnesses caused by smoke from flame-based lighting materials (candles, wood, oil lamps, butter lamps).
- Made it possible for villagers to do more work at night, e.g., separate milk, sew, and cook.

## • FINAL ACTIVITY REPORT

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**1. Project name:** Sgongshoog Tibetan Village Solar Panel Project

**2. Project period:** July 30-August 15, 2007

**3. Project site:** Sgongshoog Tibetan Village, Gtsangchenrong Township, Bathang County, Ganzi Prefecture, Sichuan Province, PR China

**4. Responsible persons:**

- Denzhu, village leader
- Bkrashi, English student, Qinghai Normal University

**5. Supervisor:** Kevin Stuart

**6. German Embassy contribution:** 20,000 RMB

**Donor Contribution:**

Item	Quantity	Unit Cost RMB	Total Value RMB	Receipt
Solar panel	25 <sup>1</sup>	780	19,500	1
Contacts	25	10	250	2
Box (for battery)	25	13	325	3
<b>Total Cost</b>			<b>20,075 (75 from local contribution)</b>	

**7. Local contribution:** 2,500 rmb

**Local Contribution**

Item	Quantity	Unit cost (RMB)	Total Value (RMB)
Transportation for panels: Xining-Bathang			1,500
Extra light bulbs	25	15	375
Fuse	50	1	50
Administrative fee			500
			2,425

**8. Total project value = 22,500 RMB**

**9. Aims:** To provide solar panels to Sgongshoog Village, decreasing household expenses, increasing productivity, increasing opportunities for children to study, and proved their live more worriless and more comfortable. We also chose twenty-five poor families in the village.

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<sup>1</sup> Because the solar panels were cheaper than planned, we are able to buy 5 more solar panels.

## **10. Project implementation record**

<b>2007</b>	<b>Detail</b>	<b>Party</b>
June 11	Proposal sent to the German Embassy in Beijing	Bkrashi
July 12	Received approval letter from German Embassy.	Bkrashi, Kevin Stuart
July 18	Contact with solar panel company in Xining.	Bkrashi, Kevin Stuart
August 7	Bought extra, bulbs, fuse, contacts, boxes	Bkrashi, Denzhu
August 10	Village meeting. Informed villagers about 20,000RMB assistance from the German Embassy. The villagers chose 25 families.	Bkrashi, Denzhu, villagers

## **11. Project aims realized, compared with original aims of the project:**

- Before the solar panel project, villagers had to walk about 20 km roundtrip to collect forest wood to burn as lighting. They also had to buy diesel and candles for lighting and used butter to burn, too. With solar panels, they no longer do this. They can now sell the butter they burnt before, or eat it.
- One collecting trip took a day and the wood collected lasted about one week. Solar panels have removed the time spent on collection and people have more time to do fieldwork and do paid labor (road repair, construction site work).
- Women and girls worried about completing their housework before dark. Now they can work at night to separate milk, sew, and cook.
- Before the project, it was difficult for students in the local village school to do homework at night. This problem has now been solved and students spend more time studying and thus learn more.

# Receipts

①

百百文化分公司 财务·良友印	收 据		Nº 0218284
	2007年7月18日		
今收到	立40件九15W板	250×780=19500元	
人民币(大写)	壹仟玖佰伍拾元整		
系付	人保专用章	收款单位及收款人 西宁天宇 张云	
内部使用 对外无效			

②

收据

电池板线:

25条×10=250元

贰佰伍拾元

2007.8.7

③

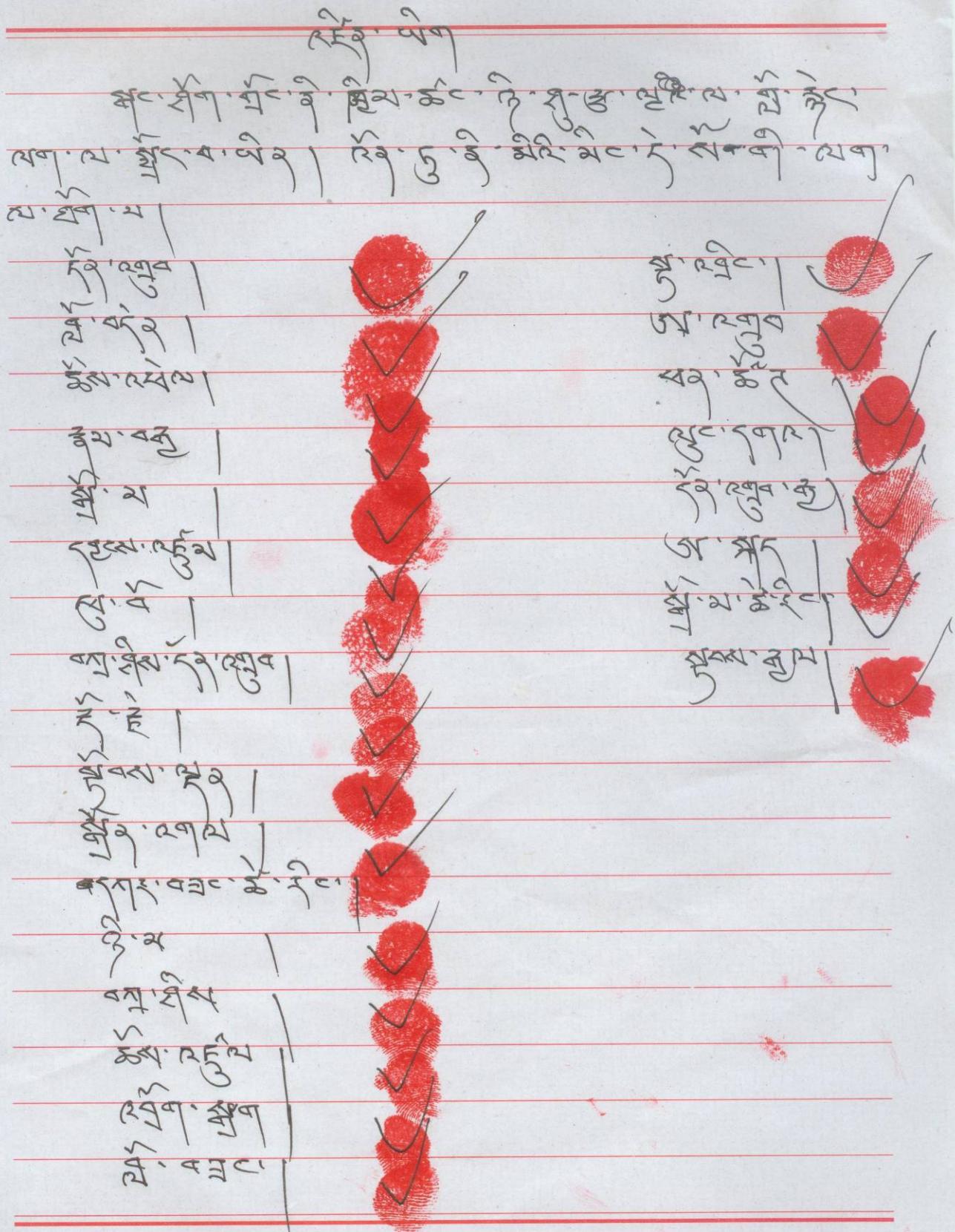
收据.

机箱:  $25 \times 13 = 325$  元

叁佰贰拾伍

陈幻

2007.8.7



DDF  
大東方

年 月 日

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# Original Proposal

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**Project Title:** Solar Panels for a Tibetan Village.  
**Project Leader:** Bkra shi (English Name: Wayne)  
**Address:** Ganzi, Sichuan,  
Phone Number: +86-13709747845  
E-mail Address: **bawayne1988@yahoo.com.com**  
(Further details about the project leader in Appendix 1.)

## Executive Summary.

I am applying for a grant of **20.000 RMB** to buy and install solar panels in 20 households in Sgongshoog Village. The solar panels and all the necessary, additional equipment, including spare parts like switches, extra light bulbs and contacts, will be bought in Xining from Tian Pu Solar Panel Factory that has indicated a price of 1,000 RMB per panel. Installation and care of the panels will be the responsibility of the project leader and comes free of cost. Tian Pu Solar Panel Factory also will take care of transport of the panels to the village for which they have indicated a price of 1,200 RMB.

The panel recipients are aware that there are costs for maintenance and spare parts, for instance batteries that have to be changed approximately every 2 years. After discussions with the village leaders we have chosen the 20 poorest families in the village for installation of solar panels for electricity production.

If possible I would like to start the project before July 5. And the installation will be finished about a month later.

A short description of the village is given in Appendix 2

The possibility of using electric power will ease the families' daily burden in many ways; see Appendix 3.

## Detailed budget.

1. Twenty solar panels, each 1.000 RMB	20,000 RMB
2. Transport Costs:	1,200 RMB
3. Spare parts	800 RMB
4. <u>Minus local contribution</u>	<u>2,000 RMB</u>

Total project cost = 22,000 RMB

Xining  
28.05.2007

## **Appendix 1: Project Leader (PL).**

My Tibetan name is Bkrashi, my English name is Wayne. I am from Sgongshoog Village, Gtsangchenrong Township, Bathang County, Ganzi Tibetan Autonomous Prefecture, Sichuan Province. I study at Qinghai Normal University. I previously implemented a second-hand clothes project in my village.

## **Appendix 2: Sgongshoog Village.**

Sgongshoog Village of Gtsangchenrong Township is 125 km west of Bathang County Town, 730 km from Kangding, the capital of Ganzi Prefecture and 1,050 km from Chengdu City, the capital of Sichuan Province. Sgongshoog Village has a total of 45 households (375 residents). Each family has an average of 6 members, representing three or four generations. The majority of village residents are under the age of 70. The village is predominately an agricultural community, and the majority of the villagers are farmers. However, in 2002, due to the threat of deforestation and increased environmental degradation in the region, the local government provided a small annual stipend to families of about 200RMB per *mu* of land that they owned. The average family owns 8 *mu*. As the only source of income for the farmers, this stipend must cover all household expenses including food, clothing, school tuition and miscellaneous town fees and taxes. During summer and fall many villagers go to the county town to earn money from various non-agricultural enterprises to supplement the government stipend. A few families tend yaks, sheep, goats, horses, swine, and cattle. The animal products are used for subsistence and sold for cash income.

About 10 villagers have jobs in the local county town, mostly in the construction sector, including roads, residences, and other buildings. Several villagers have become government inspectors who travel to local villages to ensure that residents comply with environmental regulations and do not cut trees for firewood. A few highly educated villagers have become teachers and doctors in the county town.

From 1995, selling timber was a vital economic activity for villagers and men actively cut trees from the surrounding forests and sold the lumber. In the late 1990s, the provincial government prohibited tree-cutting. Even though this trade was an important source of income for local residents, the provincial government was concerned with the adverse environmental ramifications of continued tree-felling. In 2002, the provincial and local governments issued another regulation converting all agricultural lands into forests and grasslands.

Several richer villagers tend yaks, horses, sheep, goats, cows and pigs. Poorer families own only a few cattle, pigs and yaks. Families who tend livestock can earn an income from selling milk, butter, cheese, wool, and meat. Families who own only a small number of livestock primarily consume animal products on a subsistence basis. Villagers usually do not have enough wood for their lighting. Villagers who do not have enough disposable income left over each year to purchase additional livestock depend on the annual government subsidy.

Approximately 85% of the adult villagers lack formal education. Most of them know only a little Tibetan. Some studied Tibetan and natural sciences in the local primary school. Very few of the older generation continued their education beyond primary school because families needed their children's assistance with farming. The middle school was located in the county town 120 km away, and students did not receive education in Tibetan. Even today, many young children do not proceed to middle school. The reasons for this are cultural and economic. Following grades 1-3 in the village school, students continue their education in the primary school in the township. Students must pay tuition fees at the primary school--90 RMB per term, cover housing costs at school, as well as cook their own meals. For students who are less than ten years old, cooking meals and taking care of themselves is a challenge. There are currently about 20 students from Sgongshoog Village attending the village primary school.

### Appendix 3: Solar Panel Overview.

In order to highlight the problems caused by the lack of electric light I made up a small questionnaire and asked the families concerned to reply to the questions. I have chosen a typical set of answers to put into this proposal the full report can be had at request. I

Questions	Answers Misc. burning	Answers Butter burning	Answers Wood burning
How many people are there in the household?	5 households, 30 people	6 households, 36 people	9 households, 54 people
What is your annual cash income?	2,100-3,000 RMB	3,000-4,000RMB	2,600--3,500RMB
What is your present light source?	kerosene, 2 families, rapeseed, 1 family. candles, 2 families.		
How much do you burn per month?	On average 15KG	On average 23KG	On average 30KG
How much will this cost per month?	On average 70RMB	On average 160RMB	On average 50RMB
In case you use butter for lightning, do you produce it yourself?		3 households, 18 people	5 households, 30 people, use butter in addition to wood
If you have to buy the butter, how much will it cost you per month for lightning?		On average 160RMB	About 23RMB
Who makes butter in your household?		Exclusively women	
If you burn wood for lighting, who collects it?			men and women
How do you collect the wood and how much time does that require per day?			4 hours walk each way + collection = 5 hours a day on average.
Do you have any health problems caused by the present source of lighting?	Problems with lungs and eyes	Problems with lungs and eyes.	Problems with lungs, eyes, and skin.
Do you think that solar panels will help your situation?	Yes, costs will go down and the health problems will slowly disappear.	Yes, costs will go down and the health problems will slowly disappear.	Save time and improve health.

## **Methodology**

Give 1 panel to each of the 20 poorest families in Sgongshoog Village.

- (1) I will ask for the contribution of 100RMB from each family before giving the solar panels to these families.
- (2) I will buy the solar panels in Xining.
- (3) I will visit each of the 20 families and give the solar panels to them. I will teach them how to place the panel and how to use and care for them.
- (4) I will ask them to send their children to school.

I will visit each recipient family three times a year to ensure they are using these solar panels and that they have sent their children to school. Several months following the implementation of the solar panel project, I will visit the village to monitor its success and to determine whether the project goals have been achieved. I plan to conduct interviews with the families to find out if the panels saved money and time. I will inquire about the children's welfare and find out from the families whether the children will be able to return to school. Finally, I will take photos to document the project and will include these in the final report.

The long-range goal of this project is two-fold:

- 1) To provide a sustainable income-generating stream for the 20 poorest families in Sgongshoog Village.
- 2) To enable children to continue their studies.

The immediate goal of this project is to purchase and install 20 solar panels, which will be distributed to the chosen families which will raise the living standard of the 20 poorest families.